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August 4, 2014

California Regional Water Quality Control Board
Central Valley Region
1685 E. Street
Fresno, CA 93706

Re: Caruthers Community Services District
Tentative Waste Discharge Requirements

Mr. Dale Harvey:

Thank you for the opportunity to review the Tentative Waste Discharge Requirements for the Caruthers Community Services District Wastewater Treatment Facility. On behalf of the Caruthers Community Services District please find the attached memorandum that identifies several comments and questions regarding the Tentative Waste Discharge Requirements.

Please contact me if you have any questions or if you need additional information.

Respectfully,

Michael Taylor, PE
District Engineer

Enclosure

cc: Caruthers Community Services District, David McIntyre

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MEMORANDUM

To: Caruthers CSD, David McIntyre

From: Michael Taylor

Subject: Caruthers CSD Tentative WDR R5-2014-XXXX

Date: August 1, 2014

Please find comments and questions associated with the Tentative Waste Discharge Requirements for the Caruthers Community Services District Wastewater Treatment Facility

Findings

Wastewater Treatment and Disposal

Finding 5

It is noted that subsequent to the limits identified in WDR Order 91-191, the Caruthers CSD had made improvements to the wastewater facilities and the capacity was established as 0.24 mgd, with the concurrence of the RWQCB.

Groundwater Considerations

Finding 35

It is noted that there is not sufficient information to determine the current groundwater gradient in the vicinity of the WWTP based on the groundwater monitoring wells. Until additional groundwater monitoring wells are constructed the overall gradient is theorized to be to the east. The finding that District water supply wells impact the groundwater gradient in the vicinity of the WWTP is not substantiated.

Finding 37

The potential impact of percolation from the WWTP to any specific monitoring well is presently not known. If the estimated percolation rate in the ponds is 1.0 inches per day, and if the percolated water continued at that steady rate to the approximate depth of first encountered groundwater of 140 feet, any water percolated at the wastewater treatment plant will not reach groundwater for at least 4.5 years.

The characterization of the effluent must also be taken into account when evaluating potential impacts to the groundwater.

Unfortunately, no neighboring properties are available to install groundwater monitoring wells further away from the wastewater treatment facilities.

Finding 38

The rate of decline of groundwater levels in the area severely limits the useful life of groundwater monitoring wells.

Antidegradation Analysis

Finding 48b

It is recommended to replace "removal" with "reduction".

Finding 48d

It is recommended to add "raw" prior to "wastewater".

Finding 62 and Order Provision F.17

It is requested that since the RWQCB has determined that the District has not provided sufficient justification to indicate that recycled water projects are not possible, the RWQCB inform the District as to the kind of justification it is looking for.

The District has attempted to determine destinations for recycled effluent on two separate occasions, and is willing to explore the subject again, however, the basis for determining that efforts are insufficient is not understood.

It is suggested that the District send the draft information to the RWQCB for approval prior to investigating the subject again. Only after receiving approval from the RWQCB that the information provided to property owners is sufficient would the District investigate the subject again.

Order Groundwater Limitations E.1.a.i.

It is noted that the effluent from the WWTP has a limit of 10 mg/l total nitrogen. If the effluent meets this limit, the implication of causing the nitrate concentration of the groundwater to increase would appear to be mute.

Order Groundwater Limitations E.1.b.

It is noted that the effluent from the WWTP is not disinfected. The relative potential to prove a relationship of total coliform from the WWTP to groundwater that is approximately 140 feet below ground is unknown.

Order Provision F.19

The requirement for a Salinity Management Plan is new. Please provide the basis for this requirement and the guidelines for a Salinity Management Plan that are expected by the RWQCB. Implementation of a plan, if adopted, would be limited to the legal authority of the District.

It is assumed that all new or updated Waste Discharge Requirements in the Central Valley Region have this same requirement.

Order Provision F.20

As noted previously, due to the rapid decline in groundwater levels, the present RWQCB requirement to limit the length of perforated casing result in groundwater monitoring wells going dry relatively quickly. The time and cost to locate appropriate groundwater monitoring well locations, and to construct the groundwater monitoring wells are significant for small communities such as Caruthers. If groundwater monitoring wells are required, it is suggested that the length of perforated casing is allowed to be enough for an anticipated useful life if at least 20 years. It is noted that the most recently constructed groundwater monitoring well has experienced a decline of water level of 12 feet in 2 years.

It is noted that the funds to construct groundwater monitoring wells may not be readily available. Similarly, the present drought circumstances of the central valley render the availability of well drillers to be uncertain. The requirement of completing the construction of groundwater monitoring wells within 270 days of approval of a Groundwater Monitoring Well Installation Work Plan may not be possible.

Monitoring and Reporting Program

It is noted that SPL-001 should refer to the "District's" water supply, not a "City's" water supply.

Influent Monitoring

The monthly average discharge flow units should be "mgd".

Effluent Monitoring

Since all influent flow is discharged to the evaporation/percolation ponds, there does not appear to be a basis for requiring another flowmeter for recording effluent flow. It is suggested that the effluent flowrate monitoring is deleted.

It is suggested that the monthly effluent TDS requirement is changed to a grab sample or eliminated.

Arsenic is naturally occurring in the Caruthers area. Since the primary source of any arsenic in the wastewater is the groundwater supply, the purpose of a specific Arsenic test is unknown. Please inform the District as to the purpose of this monitoring.

Groundwater Monitoring

The Quarterly sample for "Ammonia Nitrate" should be replaced with "Ammonia Nitrogen".

Biosolids/Sludge Monitoring

The words "aeration ponds" should be replaced with "treatment system".

Reporting

Source Water Reporting on page 8 is a repeat of information contained in page 7.

Information Sheet

Background

Note that the permitted capacity of the WWTP was previously 0.24 mgd.

It is noted that the District did not agree with RWQCB letters in 2006 regarding groundwater impacts.

The blower building does not house the standby generator. The standby generator is a stand alone item.

Facility and Discharge

The three pumps at the influent pump station rotate operation.

The treatment system may be programmed to turn on and off the various diffuser chains in the aerated pond. The blowers are variable speed driven and ramp up or down to maintain the set dissolved oxygen level.

It is noted that there may have been a return of solids from the sludge drying beds to the influent, which may have contributed to the buildup of solids in the aerated pond. The return of solids has been reduced and will soon be terminated.

Source Water

What is the relevance of the discussion on arsenic and vanadium?

Groundwater Considerations

The statement regarding District water supply well impact to the groundwater monitoring wells is not substantiated.

Attachment C

The Digester is Aerobic.

The RAS is discharged from the clarifiers rather than the Biolac pond.